

Analysis of ADL and IADL activities as correlates in promoting ‘Ageing-in-Place & independent living

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Abstract— Independence among the elderly when performing individual and social tasks is a very challenging issue in all societies. During the ageing process, implicit physical, physiological, psychological, and social changes generate disability in everyday personal activities and reduce independence of an individual. Decreased independence in the elderly has unpleasant consequences and can cause undue dependence on others in Activities of Daily Living (ADLs), reduce quality of life, and damage health and is an impeding factor in Ageing-in-Place. Relevant data is collected from one hundred elderly from Ernakulam district through personal interviews and observations. The analysis revealed that the impairment in ADL and IADL activities were higher among the ‘old-old’ category, the impairments were lower among ‘young-old’ and ‘middle-old’ though extraneous variables can be an influencing factor. This analysis shows the physiological deterioration that gradually impairs the capacity of people to function normally and live independently. Difficulties with ADLs and IADLs generally correlates with the extent of assistance and care an older person requires; hence periodical assessment of these are vital.

Index Terms— ADL, IADL, Ageing-in-Place, Independently living

INTRODUCTION

We can't avoid age. However, we can avoid aging. Continue to do things. Be active. Life is fantastic in the way it adjusts to demands, if you use your muscles and mind, they stay these much longer.”-Charles H.Townes.

Every person under the process of Ageing aspires to achieve an active and satisfying life with a comforting home and environment. Ageing is an uncontrollable sequence that occurs in everyone's life and is a process of physiological deterioration that gradually impairs the capacity of people to function normally. ‘Ageing-in-Place’ allows older adults to retain a high level of control over their lives, as they can continue to live in familiar spaces. Those who are accustomed to satisfying basic needs, such as purchasing and often find comfort in being able to manage these necessities independently.

This study is relevant in that it analyses the capacity of the elderly to carry out ‘ADL’ and ‘IADL’ activities and also promote ‘Ageing-in-Place’. Problems with ADL and IADL usually reflect problems with physical and/or cognitive health. So, if one identifies the difficulties of an elderly person in performing everyday tasks, the findings can assist in diagnosing and managing important health issues.

Aim:

To analyze the capacity of the elderly to carry out ADL and IADL activities and also promote ‘Ageing-in-Place’.

Objectives:

- To identify the challenges faced by selected independently living elderly based on selected Instrumental Activities of Daily Living (IADL),
- To assess the extent of independent living possible for the selected elderly for ‘Ageing-in-Place’.

Operational definitions of the major terminologies used in the study

Age-in-Place: It is a term where the person gets to choose the way or the place they live for as long as they are capable of being independent, satisfying their personal needs, until they become dependent on others for assistance. A situation allowing the elderly to continue to live their life in the homes of their youthful days.

ADL- Activities of Daily Living: According to Edemekong PF et.al, Activities of Daily Living (ADLs) are basic tasks that must be accomplished every day for an individual to thrive such as personal hygiene, continence management or mental and physical ability to properly use the bathroom, dressing, feeding and ambulating or walk independently.

IADL: Instrumental Activities of Daily living Instrumental Activities of Daily Living (IADL) are those activities that allow an individual to live independently in a community, though not necessary for functional living, the ability to perform IADLs can

significantly improve one's quality of life (QoL). The major domains of IADL include transportation, laundry, cooking, cleaning and managing finances.

Independently living: It is a lifestyle where the person is living unaccompanied by their offspring or relatives by choice or by chance, completely unassisted or partially assisted.

Literature Survey of Related Studies

Within the context of 'Ageing-in-Place', a home can be defined as a detached house, a condominium, or an apartment unit, including apartments in senior-designated buildings. In fact, only since the 1990s has the term 'Ageing-in-Place', become popular among older adults, family members, health care professionals, and policy makers. (Peace et. al, 2011).

There are many advantages to 'Ageing-In-Place'. If one thinks on economic terms, doing home renovations for home care is less expensive than going for institutional care (Canadian institute for health information, 2008).

Moreover, the social and health advantages of 'Ageing-in-Place', or at home have been extensively documented by Joosten, (2007), as including attachment to a place, familiarity with the neighbourhood, and the ability to maintain functional health.

Aging-in-place is a complex geographical process mediated by institutions and other social forces. According to Cutchin M.P. (2003), Two relatively under-studied services based on an 'Ageing-in-Place' strategy are adult day centers (ADCs) and assisted living residences (ALRs). The analysis describes how the domains of home and community are central to the originating problematic situation of elderly persons.

As per 'the web site better health while aging', (Kernisan Leslie Dr., 2017) the terms 'Activities of Daily Living' (ADL) and Instrumental Activities of Daily Living (IADL) represent key life tasks that people need to manage, in order to live at home and be fully independent. Difficulties with ADLs and IADLs usually correspond to how much help, supervision, and hands-on care an older person requires.

Activities of Daily Living - ADL: These are the essential self-care tasks that we firstly learn as very young children. ADL mentioned in the study is also referred to as "Basic Activities of Daily Living" (BADLs) include:

- **Walking**, or otherwise getting around the home or outside, technically called "ambulating."
- **Feeding**, as in having the ability to urge food from a plate into one's mouth.
- **Dressing and Grooming**, as in choosing garments, putting them on, and adequately managing one's personal appearance.
- **Toileting**, which suggests going to and from the bathroom, using it appropriately, and cleaning oneself.
- **Bathing** means washing one's face and body within the bathtub or shower.
- **Transferring** includes being able to move from a bed to a chair, or into a wheelchair. Can also include the ability to stand up from in order to grasp a walker or other assistive device.

If a person is not fully independent with ADLs, it is presumed that they require external assistance. According to Leslie Kernisan, (2017) for each ADL, there could be some elder who needs just a little help to full dependency or some requiring others to do the entire task for them.

Instrumental Activities of Daily Living (IADL's)

These are activities we usually learn in the process of becoming mature and independent, requiring more thinking and organizational skills such as:

- Managing finances, such as paying bills and managing financial assets.
- Managing transportation, either via driving or by organizing other means of transport.
- Shopping and meal preparation. This covers everything required to get a meal on the table.
- It also covers shopping for clothing and other items required for daily life.
- House Cleaning and home maintenance. This means cleaning kitchens after eating, keeping one's living space reasonably clean and tidy, and keeping up with home maintenance.
- Communication management, such as the telephone and mail.
- Managing medications, which covers obtaining medications and taking them as directed.

Relevance of IADL and ADL: Generally, older adults need to be able to manage ADLs and IADLs in order to live independently without any assistance. Geriatrician Leslie Kernisan (2017) assesses ADLs and IADLs as part of evaluating an older person's "functionality" since problems with these usually point out to issues with physical and/or cognitive health. Identifying functional difficulties can help us diagnose and manage important health problems. But most importantly, after identifying functional difficulties, we can make sure that older adults are getting the help and support they need to overcome these difficulties.

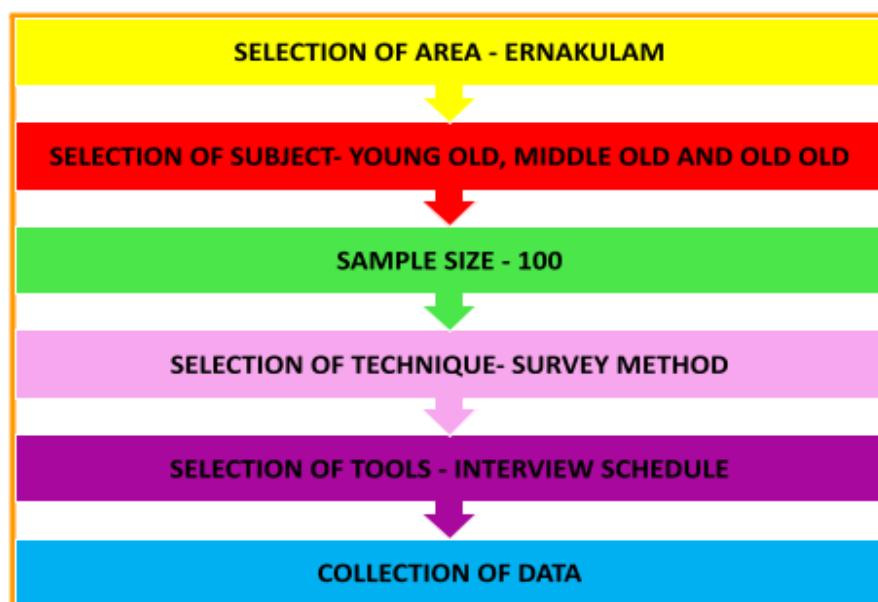
Background Studies by Shekhar Chauhan (2021) have examined functional disability among older adults by combining Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). This study adds another dimension to ADL and IADL by combining various impairments such as hearing, vision, walking, chewing, speaking, and memory loss among older adults. This study examines functional disability among older adults in India as measured by ADL, IADL, along with various impairments. The

results observed that nearly 7.5 percent of older adults reported ADL, more than half (56.8%) reported IADL, and nearly three-fourths (72.6%) reported impairments. Overall, ADL, IADL, and impairments were higher among older person's aged 80+ years, older adults with poor self-rated health, and those suffering from chronic diseases. Conclusion: It is recommended that the government advise older adults to adopt health-promotion approaches, which may be useful. Further, there is a pressing need to deliver quality care to older adults suffering from chronic conditions.

In the study conducted by Patel et. al. (2021) (Socio-economic inequality in functional disability and impairments with focus on instrumental activity of daily living: a study on older adults in India) it is found that ADL, IADL, and impairments were higher among older adults aged 80+ years, older adults with poor self-rated health, and those suffering from chronic diseases. The study noted that working older adults were less likely to report problems associated with ADL than non-working older adults. Results noticed that women older adults had a better outcome on IADL than men older adults; this means men older adults tend to have poor IADL than women older adults.

The unpublished study by Umaira Banu (2017) on the 'Analysis of Old Age Homes on the Basis of Geriatric Friendly Facilities' found out that when age increases, social contact and mobility decreases and this, in turn, compels the old to stay at home. It is necessary to provide good and hygienic housing for maintaining better health status. In rural areas children often allow their elderly parents to preserve personal autonomy and rights which can uphold the dignity of the elderly.

Methodology



Major Findings of the Study

General information of the respondents

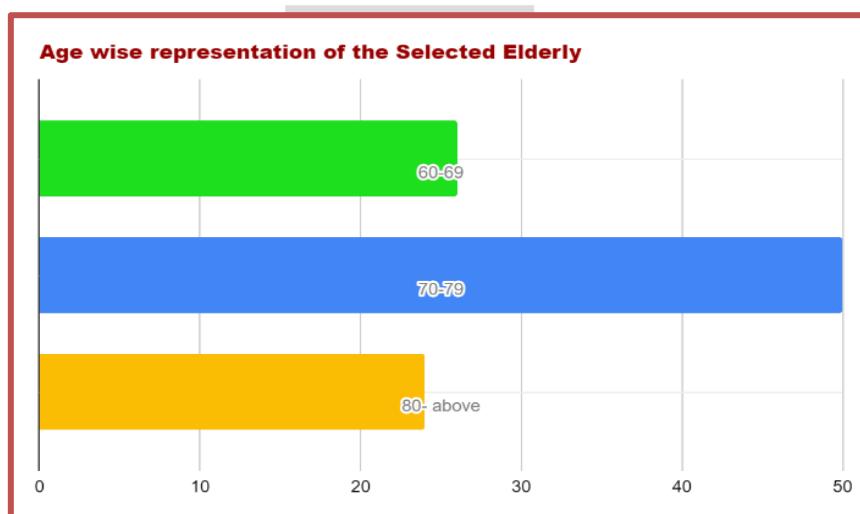


Fig 2. Age Wise Representation of the Elderly Subjects

The category of the elderly from the age group of 70-79 i.e. middle old was the highest among the elderly subjects selected for the study which was exactly 50%. The rest was almost equally divided into ‘Young Old’ (60-69 years) and ‘Old-Old’ (80 and above) subjects, i.e. 26% and 24% respectively.

A. Personal Rating of Health

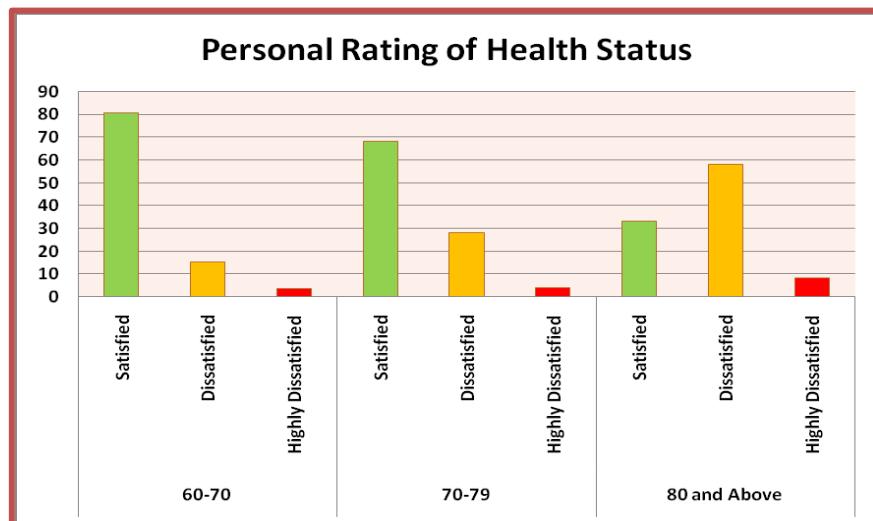


Fig 3. Health rating by subjects

The health rating was given by the subjects themselves. It was observed that most of the ‘young-old’ were satisfied with their health status. Whereas, slightly more than half (68 %) of the (middle old) were satisfied with their current health status. The rating by the elderly subject belonging to (old-old) category was very much supportive of the study, stating that more than (50%) of the group was dissatisfied with health status.

Capacity for managing ADL and IADL

1. Management of Transportation

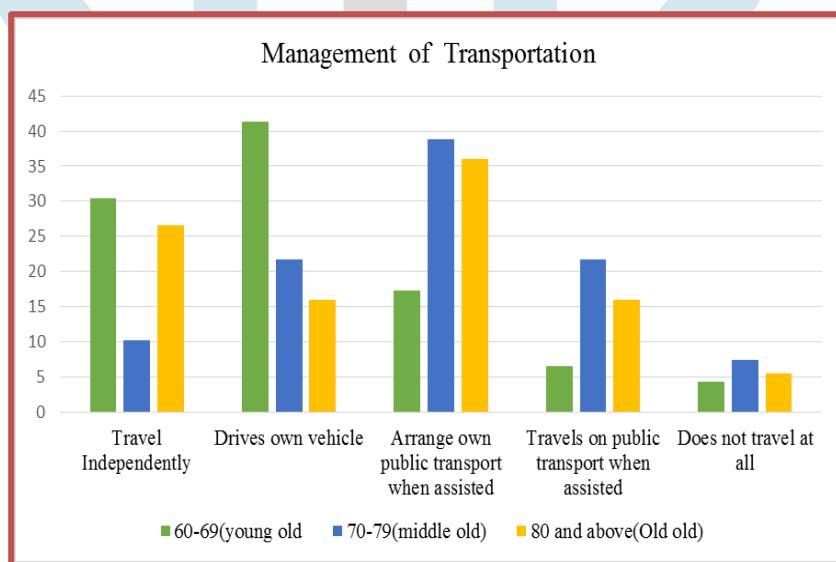


Fig 4. Management of the means of Transportation.

Regarding the mode of transportation out of the 5 categories considered for IADL, Only a negligible number of subjects do not travel at all, from all the three age categories. Almost half (41.3%) of the ‘young-old’ (60-69) drive their own vehicle compared to the other two age groups. The ‘young-old’ seems to be independent while the others are slightly dependent.

2. Management of Shopping

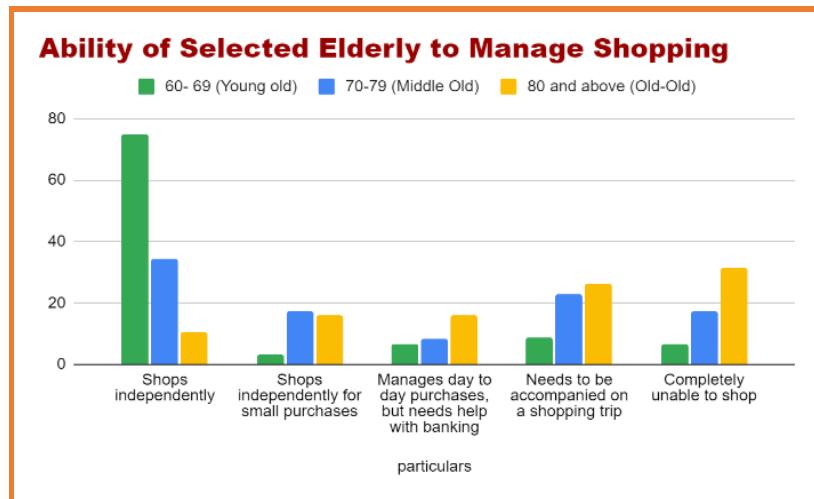
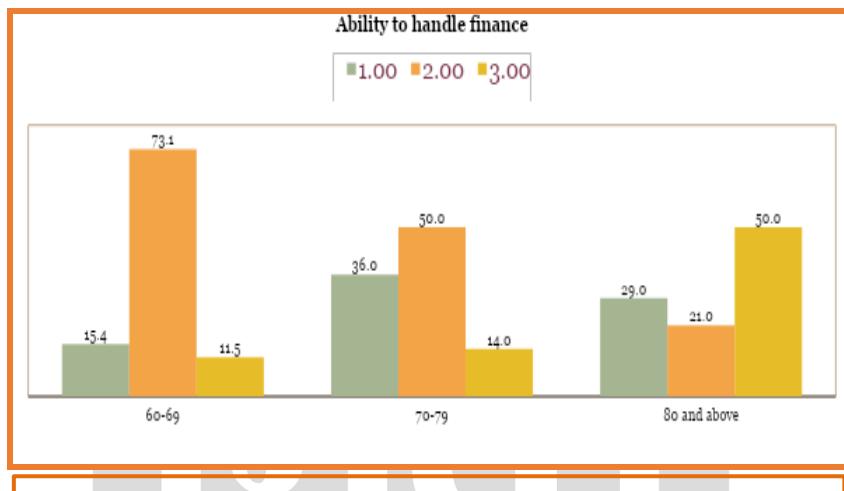


Fig 5. Mode of shopping

The figure above indicates the shopping mode of the respondents. ‘Young-old’ (60-69) are more likely (78.3%) to shop independently without assistance. Due to immobility as we age, ‘middle-old’ and ‘old-old’ people prefer to stay at home and depend on others for purchasing.

3. Ability to handle Finance



1. Manage financial matters independently
2. Manage day-to-day purchases, but needs help with banking and major purchases
3. Incapable of handling money

Fig: 6 Ability to handle Finance among Elderly

Capability to handle financial and manage day to day purchases decreased as you moved from ‘young-old’ to ‘old-old’ whereas the percentage of subjects incapable of handling money increased.

4. Participation in Food Preparation

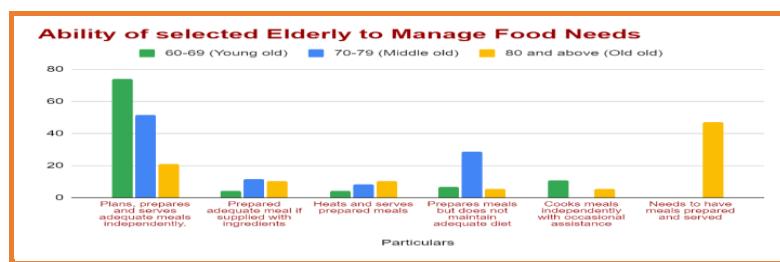


Fig 7. Participation in food preparation

The figure shows that almost 1/3rd (73.9%) ‘young-old’ people plan, prepare and cook meals independently while the independence reduces as we age where a little more than half (51.4%) ‘middle-old’ can cook independently whereas only some (21.1%) of ‘old-old’ can cook independently.

5. Participation in Housekeeping Tasks

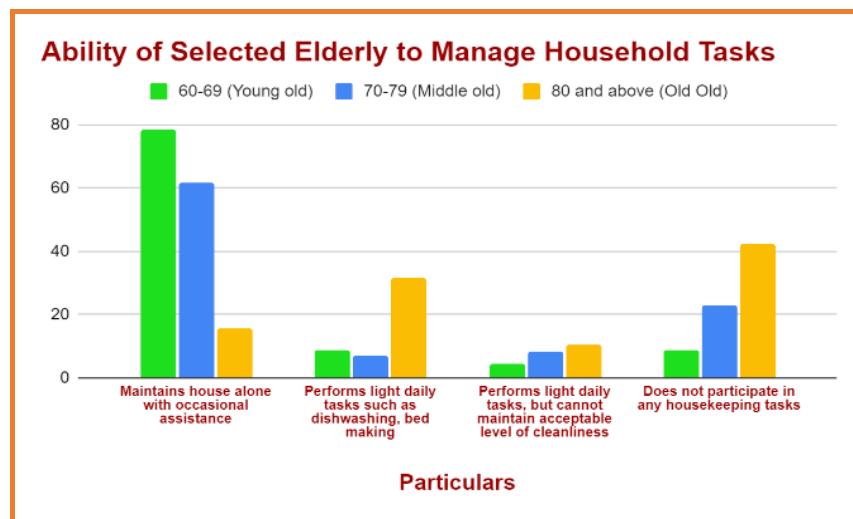


Fig 8. Participation in Housekeeping Tasks

Almost (78.3%) all ‘young-old’ seniors (60-69) participate in household activities with occasional assistance. Majority (61.4%) of ‘middle-old’ (70-79) took part in housekeeping duties while most of the ‘old-old’ (42.1%) did not participate in any housekeeping tasks.

6. Ability to use Phone

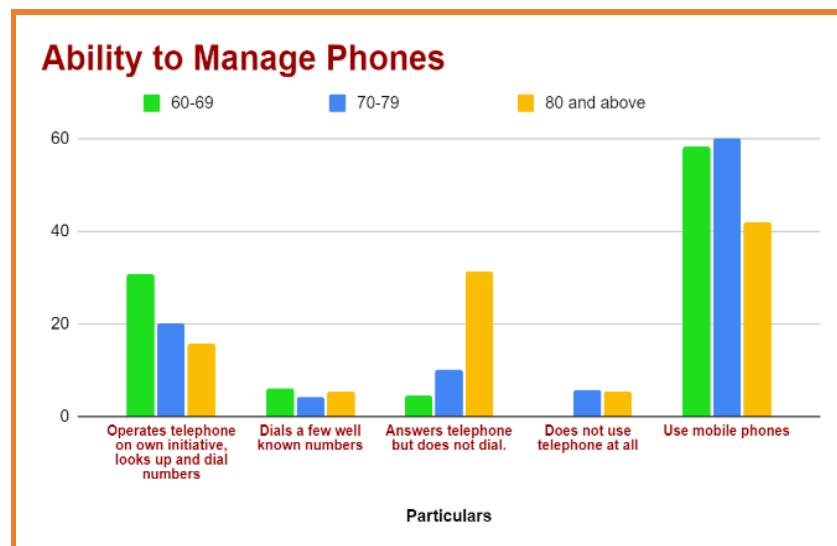


Fig 9. Ability to use Phone

The figure explains that most of the selected subjects use mobiles. With the most mobile usage found in ‘middle-old’ (65.7%). During their middle old age they started retiring and are more socially active at this age.

7. Ability to manage Laundry

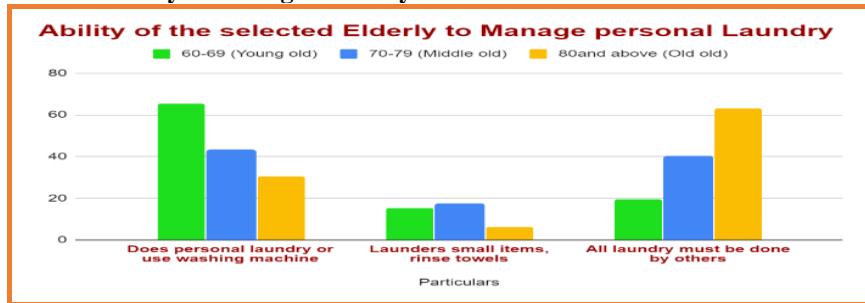


Fig 10. Ability to manage laundry

The figure shows the type of laundry done by the subjects. It shows that most of the homes are equipped with washing machines for the ease of laundry process and to fasten the process of laundry. It is found that most (63.2%) of 'old-old' people depend on laundry for others. The other 2 classes laundered using the washing machine.

8. Responsibility for Own Medication

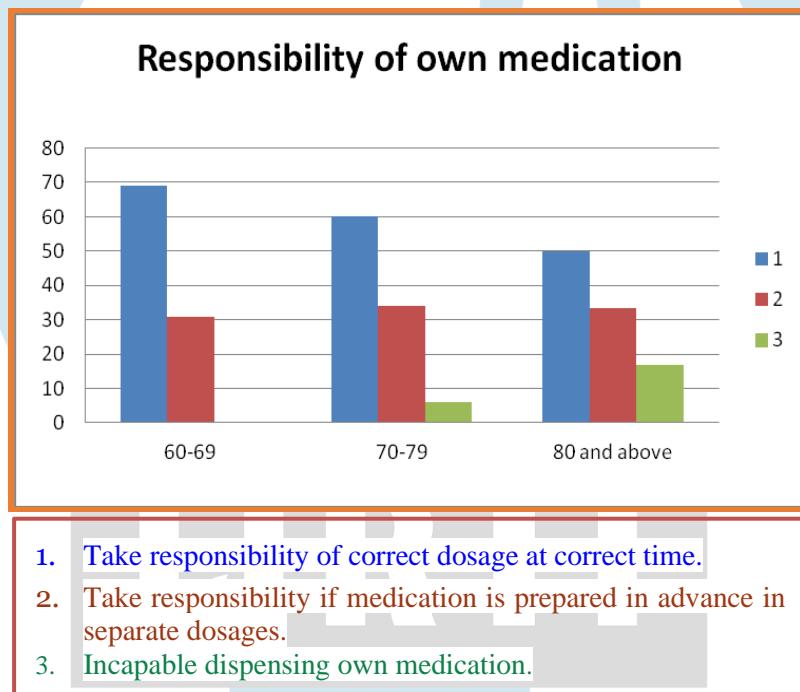


Fig 11. Ability to handle responsibility of own Medication

Ability to take their own medication decreased as the age increased. Majority (70%) of subjects in the 'young-old' could take their own medicine, whereas only 60% of the subjects in the middle old and only 50% in 'old-old' could take their own medicine.

9. Ability to manage your Financial matters (pension and social security) independently

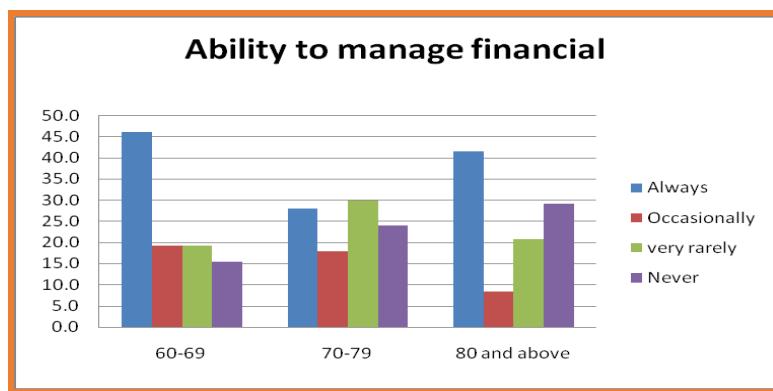


Fig 12: Ability to manage Financial matters independently

Nearly half (46.2%) Young- Old and Old- Old (41.7%) and a few (28%) in Middle Old were confident in their ability to manage their finances independently. The percentage of subjects who could never manage is on the increase from 15.4% in Young Old to 24% in Middle Old to 29.2% in Old - Old group.

Conclusion

The study showed that the impairment in ADL and IADL activities were higher among the 'old-old' category, and the impairments were lower among the 'young-old' and 'middle-old'.

Limitations:

If the sampling method is changed to stratified random sampling based on age classification (young-old, middle-old, old-old) the results could be more of generic nature.

Suggestions for future study:

Researchers should fill the gap in the literature by considering the assessment of environmental barriers and facilitators and their impacts on the prevalence of disability among older people.

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